POSTDOCTORAL RESEARCHER IN WILDLIFE POPULATION GENOMICS / LAB MANAGER

A post-doctoral research position (Postdoc; position #4712) is available to work on wildlife population genomics and serve as laboratory manager at the University of Wyoming (UW) in Laramie. The position will be primarily lab-based within the Ernest Wildlife Genomics and Disease Ecology Laboratory in the Department of Veterinary Sciences which has affiliations with the UW Program in Ecology and the University of California, Davis Wildlife Health Center. Research will use genomic (next gen sequencing) and genetic (microsatellite) to examine landscape-level genetic diversity, population structure, and phylogeography of wildlife species in the Rocky Mountain West and California. Species of focus will mainly involve bighorn sheep, and also contribute to work on pronghorn, mountain lion, hummingbird, sea otter and other species. Research work may also involve wildlife disease ecology.

The Postdoc will be involved in laboratory work, data analysis, manuscript writing for peer-reviewed publication, grant-writing, development of oral and poster presentations of research. Responsibilities will include lab management and lab technical work assisting other lab members with research (approximately 10-20 hours per week, with rest of time available for postdoc research). The Postdoc will gain valuable exposure to a collegial academic environment, as well as exciting collaborative work with state, federal, and non-governmental agencies such as the Wyoming Game and Fish Department, the California Department of Fish and Wildlife, and more. The Ernest Wildlife Genomics and Disease Ecology Laboratory is a new exciting lab at UW and the Postdoc will gain experience and knowledge in a vibrant dynamic wildlife genetics, genomics and disease ecology research environment. The Postdoc will have opportunities to work with leaders in the scientific field and in applying excellence in science toward wildlife conservation and management. Quality mentorship of trainees of all educational levels, including this postdoctoral position, is a priority for the laboratory.

There will be opportunities to gain additional experience with genotypic, genomic and disease ecology data analysis from other lab personnel and responsibilities in teaching and mentoring undergraduate and graduate students. The work includes reading and interpreting very small print and subtle visual differences such as in data readouts, lifting of objects up to 30 pounds, rabies vaccination, and occasional field work involving hiking and work in potentially harsh outdoors environments will be required (see below, under requirements).

**Qualifications: The successful candidate will have:**

1) A Ph.D. in wildlife biology, ecology, genetics, genomics, bioinformatics, or related field; and with PhD work that involved laboratory and data analysis in wildlife population genetics or genomics. (required)
2) Demonstrated knowledge, skills, and abilities in the following areas: laboratory bench work with organism sample preparation for DNA analysis and archiving, DNA extraction from multiple sample types (such as any of tissue, liquid blood, dried blood, saliva, feces, etc), PCR, preparation of samples for DNA sequencing and/or DNA genotyping (SNP and/or microsatellite); excellent pipetting and laboratory fluid handling skills for large (liters) and small (1 microliter, for example) volumes. Working knowledge of DNA capillary gel electrophoresis. Documented research laboratory and computer file organization skills and abilities. (required)
3) Experience with lab management or lab upkeep including: equipment maintenance, lab safety regulations, creating and organization of standard operating procedures, guiding and helping with lab activities of other lab members and undergraduate interns, etc. (required)
4) Quantitative skills as demonstrated through documented knowledge, skills, and abilities with R software environment, and software that are used in population genetic analysis (required)
5) Documented interest in applied conservation-oriented research in wildlife genetics, non-invasive DNA analysis, population genomics, and ecology of wildlife and their pathogens. (required)
6) Demonstrated track record of collegiality, interpersonal skills, communication, creative leadership and problem-solving abilities that promote a positive team work atmosphere. Demonstrated ability to work both independently and in teams, and ability to respond and adjust to difficult situations. Demonstrated ability to work with and communicate with wide diversity of stakeholders, staff, students, field biologists, and members of the public. (required)
7) Documented evidence of conference research presentations and peer-review science publication in wildlife population genetics. (required)
8) Demonstrated ability to conduct occasional wildlife field work that may involve harsh environmental conditions (cold, hot, windy, steep, rocky, etc.), sampling wildlife (blood, tissues, feces, potential for exposure to disease organisms that can cause illness in people, etc.), and hiking over rough terrain with heavy gear. (required)
9) Demonstrated ability to work or travel occasionally for periods of time (such as a few days or up to a week) and including weekends, holidays, and evenings; a valid driver’s license. (required).
10) Demonstrated willingness for vaccination for rabies and/or blood test for adequate rabies titer if rabies-vaccinated prior. Funding for vaccination and blood test will be provided as necessary after starting the position. (required).

Additional preferred documented skills, knowledge, and abilities include any of the following:
1. Next Generation Sequencing DNA library preparation and construction techniques and equipment (such as dd-RAD techniques, sonicator, DNA fragment analyzer, etc.), and next generation sequencing (NGS; Illumina or similar) data. (preferred).
2. Bioinformatics for genomics; such as Linux-based computing and programing; programming language used in genetic and/or genomic data analysis (such as Python, Perl). (preferred).
3. Demonstrate knowledge, skills, and abilities in any of the following areas: Quantitative (real time) and/or digital PCR, laboratory and computational analysis of genotypic DNA data (such as microsatellites, SNPs, and genotyping by sequencing), Sanger DNA sequence, mitochondrial DNA, and/or immunogenetics, non-invasive (fetal, hair, etc.) DNA laboratory techniques, construction and maintenance of SQL/relational databases for large data sets. (preferred)
4. Excellent communication with the public and wildlife professionals and abilities to translate complex genomic concepts to every day understandable language. (preferred).
5. Experience with wildlife field work that involved repeated handling of free-ranging wildlife animals in challenging environmental conditions. (preferred).
6. Wild mammalian mark-recapture study design, field work, telemetry data analysis, tracking, and/or non-invasive DNA analysis. (preferred).
7. Laboratory disease diagnostic testing including pathogen PCR testing, ELISA, or other techniques.
8. Quantitative skills as demonstrated through documented knowledge, skills, and abilities with mark-recapture analysis (such as MARK, SECR, and/or CAPWIRE and similar programs), statistics, computational modeling. (preferred).
9. Geographic Informations Systems (GIS) knowledge, skills, and abilities including ESRI Inc. programs such as ArcGIS and/or other geospatial analysis packages in R; data analysis, map and publication-quality figure creation using GIS. (preferred).

University of Wyoming hosts excellent wildlife and ecology science and a collegial academic atmosphere. Laramie offers easy access to the Rocky Mountains and outdoor activities including skiing and hiking. The University of Wyoming is an Equal Employment Opportunity/Affirmative Action employer. All qualified applicants will receive consideration for employment without regard to race, color, religion, sex, national origin, disability or protected veteran status or any other characteristic protected by law and University policy. Please see www.uwyo.edu/diversity/fairness. We conduct background investigations for all final candidates being considered for employment. Offers of employment are contingent upon the completion of the background check.

To apply for this position please submit an electronic application via email in PDF format (preferably as a single pdf file) by email to hernest@uwyo.edu with subject line including “postdoc application position #4712” and include a cover letter stating research interests, C.V., specifically list how the “required” and any of the “preferred” qualifications are met, and the contact information (name, position, email, phone, institutional affiliation, and research area) for at least three work-related references to Dr. Holly Ernest, Professor and Wyoming Excellence Chair in Disease Ecology, Department of Veterinary Sciences, University of Wyoming. Preferred start date is by Dec 1, 2015 or as soon as possible. Applications will be reviewed on or before Nov 2, 2015 and the position will remain open until filled.